

Two Stars and a Car: Reading an Arizona Road Map

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Grade Level	3
Duration	2 class periods

National Standards

GEOGRAPHY Element 1: The World in Spatial Terms

1. How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information

AZ Standards

MATHEMATICS Number and Operations in Base Ten

3.NBT.A.2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Arizona Social Science Standards

GEOGRAPHY

The use of geographic representations and tools helps individuals understand their world.

3.G1.1 Use and construct maps and graphs to represent changes in Arizona over time.

Overview

A road map shows us how to travel from one place to another using a variety of routes. One special road system is the interstate system. These roads not only link together our local cities but also connect cities across the United States. Through the special symbols used in this type of road, students will measure distance between Arizona cities.

Purpose

The purpose of this lesson is to learn about the interstate highway system and its symbols. Students will also practice determining the mileage between various Arizona cities located on the interstate highways.

Materials

- Preferred--Arizona Road Maps (available from AAA if a member) or use (scroll to second map) <https://geology.com/state-map/arizona.shtml>
- Interstate Highway Sign
- Projection device
- What is an Interstate Highway?
- 2 Stars and a Car! Student map
- Symbols on Interstate Roads
- Red stick-on stars or red crayons

- Math Activity and Answer Key
- Assessment and Answer Key
- Optional Extension Activity

Objectives

The student will be able to:

1. Locate interstate roads on a road map.
3. Determine the mileage between Arizona cities.

Procedures

This lesson sets foundations for reading a road map. It is advised to teach this lesson before teaching Racing Around Arizona where the students use a more detailed map of Arizona.

<https://geoalliance.asu.edu/node/124>

Note: Road maps may use various symbols to show mileage from one point to the next. Check the AZ road map you wish to use for this lesson to see what symbol is used. The student map in this lesson uses a star.

SESSION ONE

1. Project an Arizona road map. Explain that there are many roads on a road map. Show students the key and identify some different types of roads, such as state highways, US highways, unimproved roads, etc. Explain that in this lesson students are going to

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learn about one kind road called an "interstate highway."

2. Project the Interstate Highway Sign. Ask if any students recognize this sign. If so, ask where they have seen the sign. Have the students describe the sign (shape: shield, colors: blue and red).

Sometimes this sign has an arrow near it – Why? *(Because the arrow tells the driver where the interstate is located.)*

3. Project or distribute What is an Interstate Highway? Read as a whole class aloud.

4. Distribute the 2 Stars and a Car! Student map. Divide students into small groups. Provide Arizona road maps for the groups or project the map (scroll to second map) <https://geology.com/state-map/arizona.shtml> Have students label the interstate highways with their numbers.

SESSION TWO

1. Project Symbols on Interstate Roads explanation. Read to the class. Project the 2 Stars and a Car! Student map and explain how to measure the distance between the cities on the map.

2. Distribute red stars. Have students refer to their 2 Stars and a Car! Student Map from Session One. Read the names each of the 6 cities on the interstate roads. Have students repeat the names as you read them. Then have students place a star above each city as is named. (If red stars are not available, students can color in the stars next to each city)

3. Have the students circle the mileage between the cities as you call them out. Model how to calculate the distance between 2, 3 and 4 cities.

4. Distribute the Math Activity and allow students time to finish. Collect.

5. Distribute the Assessment. Allow students to use their 2 Stars and a Car! Student map to help them answer the questions.

Assessment

Mathematics and Geography

The Assessment Activity is 10 multiple-choice test.

Questions: #1-5 measure geographic content and #6-10 measure math skills. Mastery is considered a score of 80% or higher.

The Math Activity can be graded. Mastery is considered 12 correct responses out of the 18 possible.

Extensions

A mileage chart for the 6 cities is included for an extension activity. Teach students how to use this chart which makes calculating distance between cities much easier.

Using a U.S. Map, have students compare the interstate system throughout our country. Have them calculate mileage between two or more favorite cities.